

ABSTRACT

A variable gain amplifier includes a plurality of element circuits each having an output current that increases at a constant rate with a change in a variable control voltage, voltages that increase in steps of the change being respectively supplied to the plurality of element circuits as their reference voltages and the control voltage being supplied to each of the plurality of element circuits, multipliers for multiplying the output currents from the plurality of element circuits by one another, and an amplifier for carrying out a variable gain amplification based on an output current from the multipliers. The variable gain amplifier can suppress any change in the characteristics thereof due to temperature compensation of the characteristics and variations in manufacturing of transistors, and carry out a linear gain control operation on the control voltage when the gain is expressed in a logarithm.